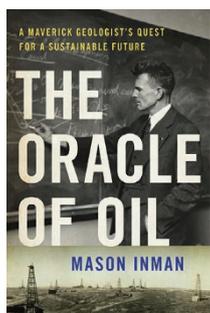


Peaks and troughs



The Oracle of Oil: A Maverick Geologist's Quest for a Sustainable Future

by Mason Inman

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Ever since the discovery of a well in 1859 in Pennsylvania, oil — for American industrialists in the first half of the twentieth century — seemed to have been gushing from the ground. By 1926, it was coming so fast that oil companies were having difficulty handling it — they had too few facilities to store it and too few pipelines to transport it. The supply of oil seemed limitless and many believed the glut would continue indefinitely.

But one man — a young geophysicist by the name of Marion King Hubbert — in the 1950s forecast that, within decades, US oil would peak and then decline, with global oil production following suit later. He also foresaw the consequences of that decline: an urgent need to find a sustainable replacement for fossil fuels or risk the end of modern civilization, as Americans had come to know it.

In *The Oracle of Oil*, journalist Mason Inman chronicles the life of Hubbert and his struggle to enlighten the world about our over-reliance on fossil fuels. Inman's carefully researched biography begins with Hubbert's early years living hand-to-mouth as a student at the University of Chicago. From the outset, Hubbert comes across as brilliant and self-assured, fearless in questioning authority — whether the church or the scientific establishment — and in challenging prevailing paradigms.

Routinely dissatisfied with many of the standard geological approaches being taught by his professors, Hubbert developed a propensity for carrying out his own experiments and calculations, even building his own scale models of geological structures to test his theories. This earned him early recognition, as well as plentiful job offers: first with the petroleum industry and then as a geophysics lecturer at Columbia University, where his maverick tendencies would continue. While there, Hubbert acquainted himself with a group of New York intellectuals and together

they launched a radical movement called Technocracy, which won huge public support across the US during the Depression for its anti-growth ethos.

But Hubbert's single-mindedness had some downsides, one of which was his seeming inability to work well with others. Easily frustrated with the bureaucracy and myopia he encountered in the working world, Hubbert left several prominent positions. He quit his lectureship at Columbia University for a government position in Washington DC, and then renounced the politics of the capitol for an industry job in Houston, Texas with Shell Oil.

Inman describes how, through all of this, Hubbert stayed loyal to his own ideas, none more so than the view — informed by decades of his own analyses — that US and global oil production would peak and then decline.

In March 1956, Hubbert made his first public prediction of this, proclaiming that conventional US oil production would peak “within a few years of 1965”. He gave a similar outlook for world oil, predicting its peak around the early 2000s. These forecasts sparked a bitter battle between Hubbert and other US oil experts, who clung to the idea that new reserves and technologies would keep oil production aloft.

But by 1970, US oil production had peaked, after which it began to fall. By 1977, Hubbert was hailed as an oracle and his thesis on oil production became the basis of US government energy policy. His forecast for the peak of global oil production also proved on the mark: according to International Energy Agency statistics, global conventional oil production peaked in 2006, at 70 million barrels a day, and has plateaued since.

However, what Hubbert failed to foresee was the potential for unconventional sources such as tar sands and shale oil to cause a second US oil boom, in the early twenty-first century. He recognized such resources could supplement supply for a century or more, but ultimately assumed that high costs would limit their extraction and production.

In carefully documenting Hubbert's numerous scientific discoveries — of which there are too many to list here — Inman reminds us that peak oil isn't Hubbert's sole contribution to the current energy debate. He was, Inman tells us, the first scientist to figure out the physics of hydraulic fracturing (‘fracking’), the controversial process in which rock is fractured by liquid injected at high pressure to release trapped oil or gas. At the request of his employer, Shell — who

initially wanted to avoid fracking because of its capacity to blow out wells — Hubbert enabled field engineers to understand and control the process. Ultimately, this information helped the evolution of fracking as we now know it, as a method to extract more oil from the ground.

Inman's portrayal leaves us in no doubt, however, that Hubbert was a true advocate of sustainability. While publicizing his predictions on peak oil he warned that humanity would soon have to seek long-lasting sources of energy, namely from water and solar power. Later, in a 1988 interview, Hubbert spoke optimistically of the possibility of transitioning to solar power: “The technology exists right now. We're talking about things we could do tomorrow. We just need to throw our weight into it.” His outlook on renewable energy's potential was hopeful, but throughout his life Hubbert remained deeply concerned about the “exponential-growth culture” that he saw dominating modern society.

Interwoven with Inman's fascinating story of this stubborn, if prophetic scientist is a broader narrative that documents the major political events of the time — the Depression of the 1930s, the Second World War, and more locally, the intellectual witch hunts of the 1940s and 50s that became synonymous with McCarthyism. Some of these events tie closely to Hubbert's own story. As a government employee in 1940s Washington DC, his past involvement in Technocracy comes back to haunt him as he's interrogated by a committee established to weed out communist sympathizers.

Such insights into Hubbert's personal experience are gems that guide the reader through what is — at times — a fairly meaty read. In documenting Hubbert's own struggle to have his ideas legitimized, *The Oracle of Oil* offers readers an understanding of the man and his methods, and in doing so, gives a fresh perspective of the topic of peak oil, relative to other texts such as *Beyond Oil: The View from Hubbert's Peak* by Kenneth Deffeyes, one of Hubbert's contemporaries at Shell.

Overall, *The Oracle of Oil* is an enlightening book that pays fitting tribute to a brave scientist who cautioned about our reliance on oil and our need to transition to a renewable energy economy, long before it was fashionable.

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